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ON THE USE OF THE SUCKING-FISH FOR  
CATCHING FISH AND TURTLES: STUDIES  
IN ECHENEIS OR REMORA, II.

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II

In 1507, there was published at Venice by Franconzio another collection of travels, entitled "*Paesi Nouamente Retrouati Et Nous Mondo da Alberico Vesputio Florentino Intitulato*" [Countries Newly Found and the New World of Albericus Vesputius Called the Florentine]. Chapters LXXXIII to CXIII faithfully reproduce the *Libretto* of 1504, are in fact a second edition of the *Libretto*, and need not detain us.<sup>14</sup>

All this however simply pushes the question back one step further and it now becomes "What or who is the source of Peter Martyr's information?" The answer is that these sources are identical with those for the "*Life of Christopher Columbus*" by his son Ferdinand, for Las Casas's history of the West Indies, and for Bernaldez's "*Reyes Catalicos*." In addition Dr. Eastman has skillfully worked out certain internal evidence which points directly to the one person who gave to Peter Martyr the data incorporated in Chapter XV of the *Libretto*.

Let us first of all consider the account which Ferdinand gives of the fisherman-fish incident, which seems to

<sup>14</sup> The "*Paesi*" was also reprinted at Milan in 1508 by Arcangelo Madrignano, and later at both Basle and Paris by Simon Gryneo. Martyr says that this plagiarism was the work of Alvico de Cadamosto and denounces him in Decade II, book 7. Martyr's "*First Decade*" was published in 1511, and the first edition of the "*Decades*" appeared in 1516 under the editorship of the author's friend, Antonio de Nebrija. The publisher seems to have been Alcala de Henores.

have occurred on or about May 19, 1494. This is found in his "Historie" as follows:

The nearer they sailed to Cuba, the higher and pleasanter the little islands appeared which were all over that sea, and it being a matter of difficulty and to no purpose to give every one of them a name, the Admiral called them all in general Jardin de la Reina, the Queen's Garden. . . . In these islands they saw crows and cranes like those of Spain, and sea-crows [gulls], and infinite numbers of little birds that sung sweetly, and the air was sweet as if they had been among roses, and the finest perfumes in the world; yet the danger was very great, there being such abundance of channels, that much time was spent in finding the way out.

In one of these channels they spy'd a canoe of Indian fishermen, who very quietly, without the least concern, awaited the boat which was making towards them, and being come near, made a sign to them in it to attend till they had done fishing.

Their manner of fishing was so strange and new to our men, that they were willing to comply with them. It was thus: they had ty'd some small fishes they call *Reverso* by the tail, which run themselves against other fish, and with a certain roughness they have from the head to the middle of the back they stick fast to the next fish they meet; and when the Indians perceive it, drawing their line they hand them both in together. And it was a tortoise our men saw so taken by those fishermen, that fish (the *Reverso*) clinging about the neck of it, where they generally fasten, being by that means safe from the other fish biting them; and we have seen them fasten upon vast sharks.

When the Indians in the canoe had taken their tortoise, and two other fishes they had before, they presently came very friendly to the boat, to know what our men would have, and by their directions went along aboard the ships, where the Admiral treated them very courteously. . . .

The close similarity between the accounts of Ferdinand and Martyr will already have occurred to the reader. Before going further it is but fair to say that Ferdinand's original copy is not known, the printed text being from Ulloa's Italian translation. However, Ferdinand was the heir of the admiral, and, since all his father's papers which were preserved seem to have fallen into his hands, may be considered as his father's literary executor. Winsor says (pages 9-10) that "Ferdinand, or the writer of the 'Historie,' . . . it seems clear, had Columbus's journal before him." Columbus

kept a journal of his second voyage until he was stricken down by sickness, and this is attested to by both the *Historie* and by Las Casas.

Ferdinand himself on this point says (Churchill's *Voyages*, II, p. 560) that, after the fishing scene above described, the Admiral held on his course though worn out with fatigue, neither having had his clothes off nor lain in a bed since leaving Spain "till the 19th of May (1494) when he writ this," *i.e.*, the account of the fishing scene in Queen's Garden. Windsor states (page 39) that the "*Historie*" was up to 1871 believed to be a biography of Columbus by his son Ferdinand, and that though doubted by some, is still firmly held to by many authorities. With the above conclusions, Dr. Eastman and I, after a careful study of all the available data, found ourselves in full accord.

Las Casas, the great apostle to the Indians, left at his death a manuscript history of the West Indies. This had been long in the writing, from 1527 possibly, or more positively from 1552, to 1561 (Las Casas died 1566), but was longer in getting published (1875). However, in its manuscript form, it was available from the time of his death for all later historians.

Las Casas's account of the fishing scene need not detain us here since it is essentially like that in the "*Historie*" by Ferdinand, and like that in the "*Libretto*" of 1504 and the "*Decades*" of 1511. Much more important is the query as to the source of Las Casas's data. Winsor (pp. 39 and 47) quotes Harrisse that he thinks that both Ferdinand, or the author of the "*Historie*," and Las Casas had access to common documents or may be a manuscript prototype of their writings. And later (p. 56) Winsor speaks of "the journal of Columbus as preserved by Las Casas."

One further source of information needs to be set forth, and then after a brief consideration of Peter Martyr's sources, this part of our study will be finished. About the middle of April, 1915, Dr. Eastman got word

of a manuscript copy in the Harvard Library of a manuscript document in the Royal Library at Madrid of Columbus's time written by a personal friend of the great navigator and narrating the events of the second voyage. A few days later he wrote me as follows:

Everything run down thus far is overshadowed in importance by the new find, ante 1500, which I take to be the *ipsissima verba* of Columbus himself. The MS. . . . now in the Harvard College Library formerly belonged to Mr. Prescott, who had it transcribed from a MS. work in the Royal Library of Madrid. A part of it was translated, rather poorly, in the Massachusetts Historical Collection before 1850, and some years later the Madrid MS. was printed (1856 at Seville and 1870 at Madrid). Irving and Humboldt both consulted the original MS. or copies of it, and historians agree that the author, Bernaldez, an Archbishop of Andalusia, not only entertained Columbus at his house on his return from his second voyage, but received the journals and other papers then in Columbus's possession. Prescott makes this statement and it is repeated by others. Now Bernaldez, in his work written before 1500 embodies practically all of Dr. Chanca's<sup>15</sup> letter, and hence we may suppose that what he takes from Columbus's papers and journals was copied nearly verbatim. I regard this as one of the most important authentic sources for the second voyage . . . coming as it does nearest to the fountain head.

Let us now consider Bernaldez's account, which as just shown seems to be a transcription of Columbus's own words.

The Admiral set sail [from Jamaica] with his three caravels, and sailed 24 leagues towards the west, as far as the gulf Buen Tiempis. . . . On Whitsunday, 1494, they stopped at a place which was uninhabited—but not from the inclemency of the sky, or the barrenness of the soil,—in the midst of a large grove of palm-trees, which seemed to reach from the sea-shore to the very heavens. . . . Here they all rested themselves upon the grass about these fountains, enjoying the charming fragrance of the flowers, and the melody of the song of birds, so many and so sweet, and the shade of the palm trees, so tall and so beautiful, that the whole was a wonder. . . . As the number of islands in this region was so great that he could not give to each a separate name, the Admiral called them all by the common name of the Queen's Garden.

On the day following, the Admiral being very desirous to fall in with

<sup>15</sup> Dr. Chanca was a physician who accompanied Columbus on his second voyage, and who wrote back a long letter describing various natural objects in the New World, but saying nothing of the Remora.

some natives with whom he might parley, there came a canoe to hunt for fish:—for they call it hunting, and they hunt for one fish with others of a particular kind. They have certain fishes which they hold by a line fastened to their tails, and which are like conger-eels in shape, and have a large mouth [*i. e.*, head] completely covered with suckers, like the octopus. They are very fierce, like our ferrets, and when they are thrown into the water they fly to fasten themselves upon whatsoever fish they may espy, and sooner die than let go their hold till they are drawn out of the water.

The hunting fish is very light, and as soon as he has taken hold, the Indians draw him by the long cord attached to his body, and in this manner they take a fish each time on drawing both to the surface of the water.

As these hunters were at a distance from the caravel, the Admiral sent his boats to them with armed men, contriving it so that they should not escape to the land. As the boats came up to them, these hunters called out to the men in mildest manner and as unconcernedly as if they had known them all their lives, to hold off, because one of the fishes had fastened upon the under side of a large turtle and they must wait till they got it into the canoe. This our men did, and afterwards they took the canoe, and those in it, together with four turtles each of which was three feet in length, and brought them to the ships of the Admiral; and there they gave some account of these islands, and of their cacique who was close at hand, and had sent them to hunt. They asked the Admiral to go on shore, and they would make for him a great feast and would give him all of the four turtles they had caught.

Now for a short consideration of Peter Martyr's sources, which seem to be in common with those of Ferdinand Columbus, Las Casas and Bernaldez, if we may judge by the marked similarity of the accounts. There can be no doubt that Martyr, who during all the years of Columbus's voyages, was an attendant at the Spanish court, knew Columbus personally and held converse with him about his voyages and the wonders seen thereon. Winsor says (page 34) that "Peter Martyr knew Columbus," and adds that "Las Casas tells us how Peter Martyr got his accounts of the first discoveries directly from the lips of Columbus himself and from those who accompanied him." And on the next page (35) we read "Martyr . . . composed a special treatise on the discoveries in the New World . . . under the title 'De Orbe Novo' . . .

(which) occupied his attention . . . till the day of his death. For the earlier years he had . . . not a little help from Columbus himself."

Let us now see what Thacher, the latest and most profound of the biographers of Columbus, has to say as to Peter Martyr's sources, and we have done with this part of this paper. On p. 215 of volume II (1903), he says: "The Admiral and some of his followers wrote to Peter Martyr, and Peter Martyr thereupon wrote [a series of letters] to an Italian Duke and to a few Cardinals." On p. 218 "... Peter Martyr, who not only had access to all public documents, but who himself corresponded with Columbus." On p. 440 Thacher referring to Peter Martyr speaks again of "... Personal correspondence with the Admiral."

Confirmatory of all the preceding it may be noted that the Spanish Jesuit, Nieremberg, professor of physiology in the Royal Academy of Madrid, in writing of the *Reversus*, quotes Christopher Columbus. It seems not unlikely that he had in his day (his book was published in 1635) access to some of the Columbus manuscripts, may be to the journal of the second voyage. And earlier than Nieremberg, Gesner (1558) on page 483 refers to "Christ. Colūbus" as his authority for the story of the hunting fish. Furthermore Humboldt (1826) quotes Columbus on the activities of the *Reves*.

From a consideration of all this testimony, no other conclusion can be reached than that Peter Martyr had from Columbus's own lips or from his manuscript journal of the second voyage (see reference to Ferdinand's "Historie" on p. 447), or from both, the account of the use of the fisherman fish at the Queen's Gardens on May 19, 1494. Consequently the first man to see and describe the use of the sucking-fish as a living fish-hook was no other than Christopher Columbus, the great admiral of the ocean.

Long before this the reader has probably asked, "What belief is to be given these accounts of a matter apparently

so incredible?" In answer first let us consider the innate probability of these accounts coming from such diverse sources. It hardly seems probable that such an extraordinary phenomenon, reported separately by Dampier, by Commerson, by Salt, by Holmwood and by Wills for one general locality, and by Columbus and his chroniclers for a part of the world nearly 5,000 miles away, could be other than an actuality. Indeed Humboldt, knowing only of Commerson's and the Spanish accounts, gave them full credence (1826 and 1833). He quotes Captains Rogers and Dampier, and Columbus, and then comments on the manner in which distant and alien peoples achieve the same ends by diverse means, the Americans having a fisherman-fish and the Chinese a fisherman-bird (the cormorant), both serving the same purpose. He thinks that the particular fish is not the small *Remora* but the large *Echeneis naucrates*.

P. H. Gosse (1851) in the volume on "Fishes" in his "Natural History," refers briefly to the old use of *Remora* as a fisherman at "Hispaniola and Jamaica" and concludes as follows:

From some observations of our own on the habits of a large West Indian<sup>16</sup> species, we are inclined to believe this account, though we do not know that the device is at present employed.

The distinguished Cuban ichthyologist, Felipe Poey (1856), refers to the Reversus story in a general way, does not seem to think it improbable, but is silent as to any such use in Cuban waters in his time, hence we may safely conclude that the *Jardinellas de la Reina* no longer witness the exploits of the fisherman fish.

But the reader may object that these stories, especially the Columbus accounts, date back into the far past, and may wish to know if there are any present-day statements to be adduced confirmatory of those already given. It may be answered that there is quite a number equally as

<sup>16</sup> Acting on this hint, Gosse's "A Naturalist's Sojourn in Jamaica" (1851) was carefully worked over, but with negative results.



circumstantial as those quoted above. These will be taken up chronologically for the localities involved.

And just at this point I am happy at being able to give what is almost an eye witness account of an almost present day use of the Remora as a living fish-hook in the very waters in which Columbus sailed. Lady Annie Brassey tells us that, while the "Sunbeam" lay at anchor in the roadstead of La Guayra, Venezuela in 1885:

. . . in one of the Indian canoes which we passed we noticed a sort of sucking-fish (*Echeneis remora*), which is used in catching other fish. Arrived at the field of operations, the fisherman lets go an anchor and puts the sucking-fish, attached to a long line with a buoy at the end of it, overboard. It sees other fish at a great distance, darts after them, and attaches itself to them by means of the sucker on top of its head. The Indian easily raises his little anchor, paddles leisurely after the remora, removes the captured fish into his canoe, and repeats the operation until he has caught as many fish as he wants. Thus, one of the ugliest and most incapable-looking of creatures is made by savage instinct to become of some use in procuring food for the superior animal.

C. F. Holder, who knew the fishes of the Florida Reef as no other scientific man ever has, refers to Holmwood's accounts, makes mention of Columbus, notes that the fish is easily tamed and goes on to say (1905):

It is this Remora of which the story is told that fishermen employ it in the Caribbean Sea to catch turtles. The Remora is kept, so runs the story, in a pail; a ring is placed about its tail and to this a line. When the men sight a turtle the Remora is slipped overboard and it is supposed darts at the turtle, seizes it, and holds on with such firmness and vigor that the animal can be hauled in.

It is interesting to note that in the first paragraph, Holder uses the present tense. Since he refers to them, he certainly had knowledge of the Columbus Guianan stories in all of which the fish has no ring affixed to its tail, and is carried to the fishing grounds not in a pail but adhering to the outside of the canoe. The same account in almost the same words is found in one of the stories in his charming little book "Stories of Animal Life" (1899). In this the account of this curious fishing is somewhat amplified, and is accompanied by a drawing, Fig. 8, Plate III, of

this paper in a photographic reproduction of Holder's illustration and being a very spirited one is of interest and value. It is of course not a picture of an actual occurrence.<sup>17</sup>

In the paper previously referred to (1905) Holder tells of trying to catch turtles and sharks by means of a living fish-hook, in which effort, however, he was unsuccessful. He says:

I experimented with the Remora but the fish invariably refused to dart after the turtle, preferring to find shelter under the boat. One tossed to a shark was seized by the latter, that doubtless thought it a votive offering. Possibly something was wrong: our remoras may have been stale: they surely were not ship or turtle slayers.

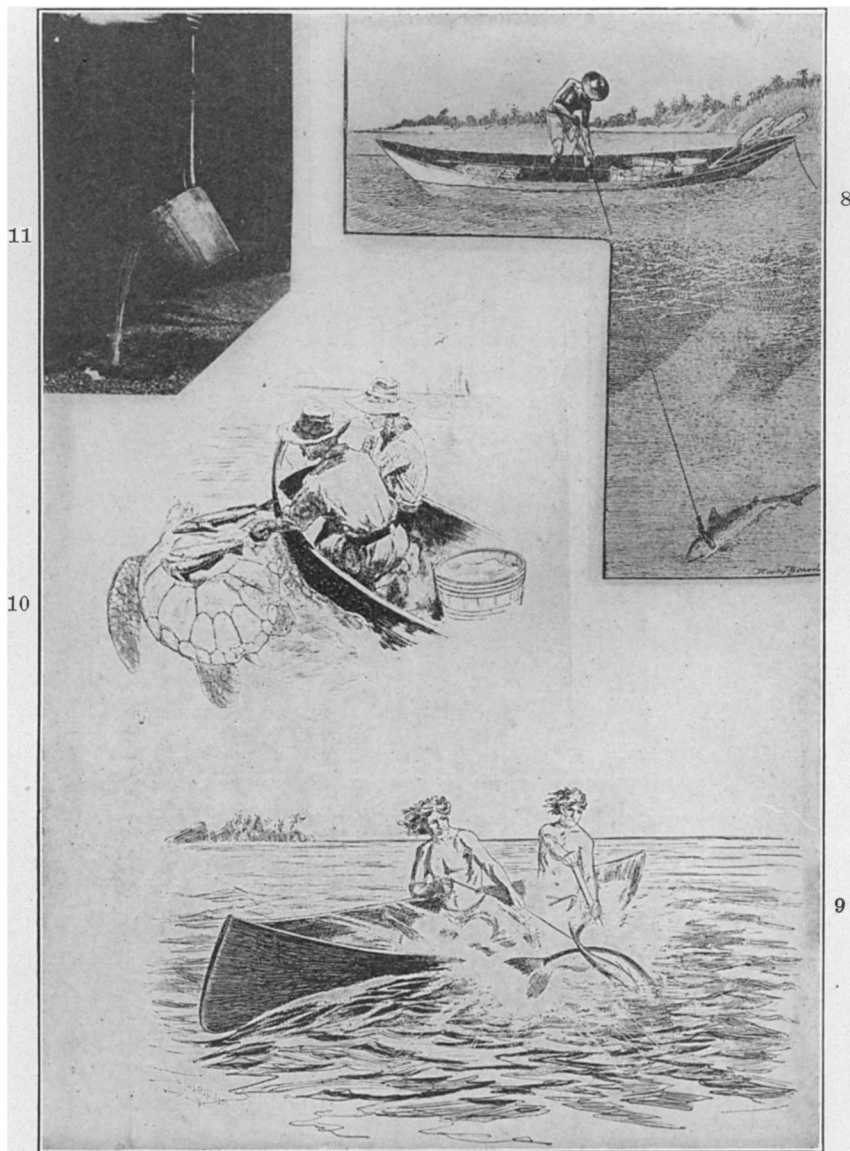
In this connection the only other modern figures of fishing with the living fish-hook may be given. Fig. 9, Plate III, is a reproduction of one of the illustrations from Hudson's "Curious Bread Winners of the Deep" (1893). It was made to illustrate the story copied from Ogilby's "America," and is reproduced here for the sake of completeness. The other figure number 10, Plate III, is from Frederic Ober's "Crusoe's Island" (1901). He gives the Columbus story and has had this figure drawn to illustrate it. The same data without the figure is found in an earlier book by Ober—"Travel Tales of the West Indies," 1888.

#### THE LIVING FISH-HOOK IN CHINESE WATERS

From the Caribbean we will go half way round the world to find the same story in all its essentials told of the fishermen along the southern coast of the Celestial Empire. Our reference here is to Frank T. Bullen, who in his delightful book "Denizens of the Deep" (1904) gives the following interesting account:

Turtles are many on the Chinese Coast, and the guileful Chinese fisherman has developed a splendid plan for securing them with little

<sup>17</sup> The same figure and essentially the same data are to be found in Holder's "Half Hours with Fishes, Reptiles, and Birds." New York, 1906, page 80 and figure 49.



### PLATE III

FIG. 8. Fishing with the living fish-hook. After Ober, 1901.

FIG. 9. Fishing with *Echeneis*. After Hudson, 1893.

FIG. 10. Fishing with the Remora. After Holder, 1899.

FIG. 11. An *Echeneis*, twenty-six and one half inches long, having a disk five and one half inches long, lifting a bucket of water weighing twenty-four pounds. After Townsend, 1915.

trouble to himself. He captures some *Remoræ*, those little sharks [?] that are so lazy that they have developed a sucking arrangement on the top of their heads, whereby they may, and do, attach themselves to anything that is likely to float them into the vicinity of food to be obtained without effort. Carefully he welds [?] a ring round their tails in such wise that it cannot be pulled off, and to it he attaches a thin, strong line; then, putting out to sea with six or seven of his unwilling helpers attached to the bottom of his sampan, he gets a good offing and waits patiently for the appearance of a turtle asleep upon the sea. As soon as his keen eyes have detected one, he paddles noiselessly in that direction until, getting near enough, he ships his paddle and, with a long bamboo, pushes off one or two or more of his *Remoræ*. Now all he needs to do is to keep them from fastening on to the canoe again, for they speedily discover the turtle and attach themselves to him. When they have done so, the quaint yellow fisherman in the boat needs but to haul in, for you may, by pulling upon a *Remora* from aft, tear him in two pieces, but you cannot make him let go his hold. And so despite his struggles the poor turtle must come [in]. . . .

In corroboration of this account, Dr. Alfred G. Mayor tells me that he has read in Singapore newspapers that the fishermen of that city commonly make use of the sucking-fish in the manner just described.

#### FISHING WITH THE REMORA IN TORRES STRAITS

There are now to be given a number of very circumstantial accounts of this mode of fishing in yet another part of the world—Torres Straits between Australia and New Guinea. The first is from the pen of John MacGillivray. In his "Narrative of the Voyage of the Rattlesnake" (1852), volume I, page 300, he tells of the rescue of a white woman, Barbara Thompson by name, who had been held captive for some years by the natives of Muralug or Western Prince of Wales Island in Torres Straits and had been named by them Giom or Gi(a)om.

In Volume II, pages 21–22, MacGillivray says:

This last (an unnamed species of turtle), I was informed by Gi'om, is fished for in the following extraordinary manner. A live sucking-fish (*Echeneis remora*), having previously been secured by a line passed round the tail, is thrown into the water in certain places known to be suitable for the purpose; the fish while swimming about makes fast by

its sucker to any turtle of this small kind which it may chance to encounter, and both are hauled in together.

Our next account is an eye witness one dated but a few years after MacGillivray's. John Jardine was for some years police magistrate at Somerset, Cape York, where his duties brought him into close contact with the natives. As a result of his experiences, in 1866 he published the following account of fishing with the sucking-fish at Cape York:

A singular mode of taking the hawkbill turtle is followed by the natives here. This custom, though said to be known so long back as the time of the discovery of America by Columbus, is so strangely interesting that I will give a short account of it as I have seen it practised. A species of sucking-fish (*Remora*) is used. On the occasion to which I allude, two of these were caught by the blacks in the small pools in a coral reef, care being taken not to injure them. They were laid in the bottom of a canoe, and covered over with sea-weed—a strong fishing-line having been previously fastened to the tail of each. Four men went in the canoe; one steering with a paddle in the stern, one paddling on either side, and one in the fore-part, looking out for the turtle and attending to the fishing lines; while I sat on a sort of stage fixed midship, supported by the outrigger-poles. The day was very calm and warm, and the canoe was allowed to drift with the current, which runs very strong on these shores. A small turtle was seen, and the sucking-fish was put into the water. At first it swam lazily about, apparently recovering the strength which it had lost by removal from its native element; but presently it swam slowly in the direction of the turtle, till out of sight; in a very short time the line was rapidly carried out, there was a jerk, and the turtle was fast. The line was handled gently for two or three minutes, the steersman causing the canoe to follow the course of the turtle with great dexterity. It was soon exhausted and hauled up to the canoe. It was a small turtle, weighing a little under 40 lbs., but the sucking-fish adhered so tenaciously to it, as to raise it from the ground, when held up by the tail, and this some time after being taken out of the water. A strong breeze coming on, the canoe had to seek the shore without any more sport. I have seen turtles weighing more than 100 lbs., which have been taken in the manner described.

We next hear of this fish in Gill's "Life in the Southern Isles" (1876), wherein he corroborates MacGillivray and Jardine in the following citation:

Another mode of turtling is to call in the aid of the *Echeneis remora*, or sucking-fish, which is about three feet in length, and is easily caught by a line. When caught the Straits Islanders pierce the tail, in order to insert a strong cord, which is also wound round it for the sake of security. Generally captive sucking-fish are kept swimming after the canoe until a turtle is seen, when three or four of them are thrown as near the sleeper as possible. These sucking-fishes at once attach themselves to the turtle, which awakes to find itself a prisoner. The cords are now cautiously hauled in, bringing the sucking-fishes and the turtle. This ingenious device is used only with the smaller turtle. Sucking-fishes are sometimes kept two or three days in a lagoon or in a boat half-filled with sea-water, until turtles are seen.

In 1888, Professor A. C. Haddon was a member of an expedition to Torres Straits to study corals, and while there (some eight months) he made notes of the use of *Echeneis* as a turtle-catcher and of its supernatural powers. Brief accounts of this remarkable use of the fish were published in 1889, 1890 and 1890a (see in bibliography under Haddon), but as a much fuller account by him will be given later the above need not be quoted here.

Stirred up by Haddon's note of 1889, Sclater later in the same year in *Nature* called attention to Holmwood's article. And, stirred by Sclater, H. Ling Roth in the same volume of the same journal cited the account by Ferdinand Columbus given in Churchill's *Voyages* as quoted on page 448.

Saville Kent in his book, "The Great Barrier Reef of Australia" (1893), has the following to say anent our subject:

A method frequently employed by the natives of Torres Straits to capture turtles is remarkable. The large sucking-fish, *Echeneis naucrates*, which grows to a length of three or four feet, and is distinguished by the natives by the title of "Gapu," is pressed into service. The fish is kept alive in water in the bottom of the native canoe, a thin line being fastened round its tail and through its gills. On a turtle being sighted in the vicinity of the canoe, the sucking-fish is thrown towards it, and immediately swims to and fastens on its carapace. If the turtle is of small or medium size, it is hauled in by the line, the fish retaining its tenacious hold; but if it be a large one, a native jumps overboard with a stronger line, and, following the smaller one down, secures the reptile.

Corroboratory of the foregoing is the following account extracted from Semon's book "In the Australian Bush" (1899). In describing the catching of the turtle, *Chelone midas*, by divers who jump on its back, or by fishermen who harpoon it, Semon adds:

. . . but a third very peculiar method of capture is adopted in Torres Straits. In clear weather and a tranquil sea, the sharp eye of the native is able to discern any turtle reposing on the bottom of the sea in the neighborhood of the coral reefs. Now a sucking-fish, or Echeneis, to the hind fin of which a long string has been fixed, is thrown into the water above the place where the turtle has been seen. It will immediately descend into the depth and attach itself to the shell of the reposing Chelonian, and as a communication is thus established between the boat and the turtle, a native following the leading string, dives and winds a rope round the beast, as the sucking-fish does not attach itself quite firmly enough for the fisherman to draw the heavy weight up by it.<sup>18</sup>

This last statement must not be interpreted as contradictory of the foregoing accounts of catching turtles *on the surface* with the sucking fish. Bringing boat and turtle together on the surface by pulling on the line is one thing, hauling a turtle up from the bottom is quite another, as any reader knows who has ever endeavored to land a ray or other large flat fish which insisted on clinging to the bottom. This latter is purely a problem in hydrostatics.

Entirely independent of any of the foregoing accounts is that of the Australian ethnologist, W. E. Roth. Here the location (Tulley River) is different, as is the final manner of taking the fish, turtle, or dugong. Roth's statement follows:

On the coast-line in the neighborhood of the Tulley River, the sucker-fish, *Remora*, is utilised as a guide for spearing or harpooning fish, as well as turtle and dugong. This sucker-fish, known to the Mallanpara blacks as *kamai*, is found usually on the rocks at the outlying islands, and sometimes stuck on their own canoes. It is removed, kept in a canoe, bark-trough, etc., with a little water, and left there for a few days. Then, going out to sea, the native ties a fine twine round the Remora's tail, and as soon as he sights any big fish, turtle or dugong,

<sup>18</sup> This account is also found in the German edition of Semon's book published at Leipzig in 1903.

advances his canoe as far as possible, and drops the sucker-fish overboard. In all probability, the sucker will go straight for the object and attach itself: it acts only as a guide, and tells the hunter the next move of his prey. The aboriginal now plays the line out very guardedly, draws it in with equal care and caution, and as soon as the length submerged reaches a point on the line, previously marked, he knows that he is within striking distance, and as his quarry comes to the surface, uses the spear or harpoon accordingly. It must be borne in mind that in no sense does the sucker-fish pull the prey into the hands of the hunter: it only indicates the direction in which the harpoon, etc., can be advantageously thrown.

The account given by N. W. Thomas in his book "Natives of Australia" (1906) is taken almost verbatim from the above and beyond this mere citation no notice will be taken of it here.

We now come to another account of the peculiar use of *Echeneis* under discussion, and I am able to offer no less an authority than the "Encyclopædia Britannica," in the eleventh edition of which, in Volume XXII (1911), in the article on Queensland, Australia, Mr. T. A. Coghlan writes:

In Torres Strait and the northern coast the hawksbill turtle . . . is said to be captured in a peculiar manner, the sucking-fish or remora (*Echeneis naucrates*) being utilized by the islanders for that purpose. The remora is carried alive in the bottom of the canoe, a long thin line being attached to the fish's tail and another usually to the gills. On a turtle being sighted and approached to within the length of the line, the sucking-fish is thrown towards it, and immediately swims to and attaches itself by its singular head sucker to the under surface of the turtle which if of moderate size is easily pulled into the canoe.

During the year 1898, Professor A. C. Haddon was leader of the Cambridge University Anthropological Expedition to Torres Straits. On this expedition he made an extensive study of the use of the fisherman fish. Professor Haddon's data is so complete that he has effectually settled the matter of the present-day actual use of the fish for taking other fish, and since his reports are of the highest value, putting as they do the imprimatur of truth on the whole matter, they will be referred to in some detail.

Professor Haddon's first account based on the data of



his second expedition is to be found in his "Head Hunters: Black, White and Brown" (1901). This gives essentially the same data as that contained in the short article in *Folklore*, 1890, but for fuller accounts we must turn to the various reports of the Cambridge Anthropological Expedition to Torres Straits.

Taking up these reports chronologically fits in well with the scheme of this paper, as will be seen presently. Volume V (1904) deals with the "Sociology, Magic and Religion of the Western Islanders." Here Haddon gives three folk tales, one of which has to do with the origin of the use of the *Gapu* (the native name of the sucking-fish), and two with its use. Later in the same volume Dr. Rivers gives a very detailed account of the method of procedure in fishing with the *Gapu*. This data will be found later in Haddon's final account of the use of this fish. Further along in Volume V Haddon and Rivers give accounts of the *Gapu* as a totem.

Volume VI of the Reports bearing date 1908 has for its title the "Sociology, Magic and Relation of the Eastern Islanders." These peoples do not seem to have so many tales of the *Gapu* as their western brethren since Haddon records but two. It seems apart from the purpose of this paper to insert any of these folk tales here, but it is my purpose later with Professor Haddon's kind permission to collect them and publish them in a short article.

We now come to the latest, most detailed, and most valuable of all the accounts of the use of the living fish hook in Torres Straits. In Volume IV of the Reports issued in 1912, Professor Haddon gives a very circumstantial account and this will be quoted in full. In this volume, dealing with arts and crafts, fishing with the sucking-fish is frequently referred to. The fish is well known to the natives as their myths and legends show and it is a common motif in their ornaments and ornamentation. Haddon's account of its use now follows:

The most interesting method of catching turtle is that in which the sucking fish (called *gapu* in the western part of the straits, and *gep* in

the eastern) is employed. . . . The sucker-fish is not used to haul in the large green turtles; I was repeatedly assured that it would be pulled off, as the turtle was too heavy; but small ones are caught in this manner. . . .

According to one of the folk tales, there was a time when the people of Badu did not know how to catch turtle by means of the sucker-fish, and they used to employ a black toothless "dog-fish," *Kumsar*, when they went for turtle. The story goes on to tell how Bia taught his fellow islanders how to employ the sucker-fish. In the Bomai-malu legend of the Miriam, it is stated that Barat of Moa, according to the fashion of olden times, tied a rope around the tail of a *kamosar*, then he made a sucker-fish, and instructed the Western Islanders who were with him how to catch turtle with it. I do not understand how turtle could be caught by a "dog-fish," but as the identity of this fish, which is said to live in the crevices of the rock in deep water, is unknown, nothing further can be said, except to hazard the suggestion that it may be an unidentified kind of lamprey; but against this it must be stated that no member of the Cyclostomata is known from Queensland waters, though *Mordacia mordax* occurs in Tasmania and species of *Geotria* are found in southern Australian waters.

I was informed that in leashing a sucker-fish, a hole is made at the base of the tail-fin by means of a turtle-bone and one end of a very long piece of string inserted through the hole and made fast to the tail, the other end being permanently retained. A short piece of string is passed through the mouth and out at the gills, thus securing the head end. By means of these two strings the fish is retained, while slung over the sides of the canoe, in the water. The short piece is pulled out of the mouth of the fish when the turtle is sighted and the *gapu* is free to attach itself to the turtle.

According to Professor Haddon there is a certain ceremonial or set rule of procedure always definitely followed in fishing with the *gapu*. This he describes as follows, his data being chiefly taken from Rivers as noted above:

When starting on a trip to fish for turtle by means of the sucker-fish, the owner (or captain) of the canoe gives the order where to go and when to let go the anchor, having arrived at their destination.

The *buai-garka* (mate, also brother-in-law of the owner or captain) makes a fire on which he places some turtle-bone which the owner has brought with him. When the bone is charred the *buai-garka* breaks it up and throws it into the water so as to attract the sucker-fish. When one is caught it is the duty of the *buai-garka* to attach to the fish the leashing which he had previously made.

The direction of affairs is now assumed by the *buai-garka*, who gives the word to move to another place, and the directions where to go.

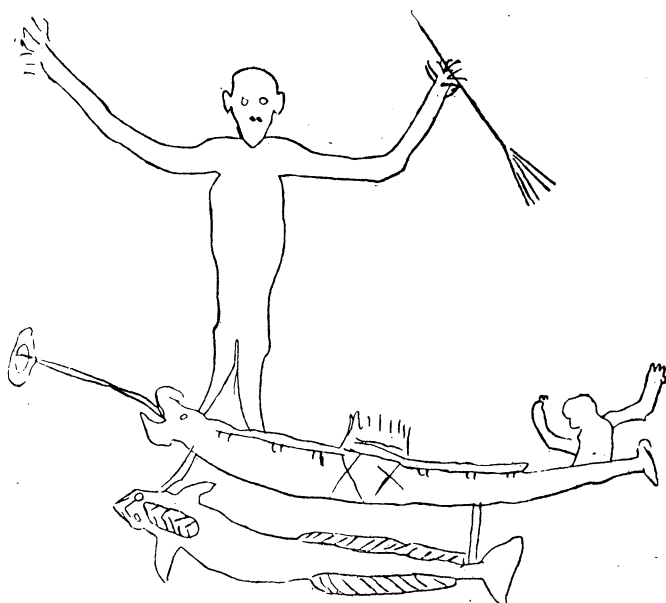
When he gives the order to stop, the mat sail is rolled up by the other men (or at the present time the sail is lowered), he not taking any part. He gives the order to paddle till he sees the turtle, then gives the word to stop, and the anchor is let go by the owner, having been previously shifted to the stern of the canoe. When the *buai-garka* sights a turtle swimming deep down in the water, he removes the mouth string from the sucker-fish and throws the fish overboard with the tail-line attached and plenty of slack is thrown with it, he then hauls in the superfluous slack and as far as possible indicates the direction of the turtle by pressure on the line. The sucker-fish on perceiving the turtle immediately swims towards it, and attaches itself to the reptile's carapace. When this is accomplished, the *buai-garka* gives the order to heave up the anchor and move the boat up to the position of the turtle.

One of the crew (but not the *buai-garka*), with a long rope attached to the right upper arm, dives into the water, and is guided to the turtle by the line fastened to the fish's tail. On reaching the turtle, the man gets on to its back and passes his arms behind and below the fore flappers and his legs in front of and below the hind flappers, or secures it in some other way. The man is then rapidly drawn up to the surface of the water bearing the turtle with him. On the arrival of the diver the sucker-fish usually shifts its position from the upper to the under surface of the turtle. As soon as enough turtle have been obtained, the owner of the canoe gives the order to go home, and the *buai-garka* resumes his subordinate functions, and resigns into the hands of his brother-in-law the direction of affairs which had been his part during the actual process of fishing. The *buai-garka* knows whether the fish has attached itself to a turtle or to a shark by the nature of the motion of the string. If the pull is intermittent it means that the fish has adhered to a shark, but if steady, then a turtle has been secured.

In a footnote Professor Haddon tells us that the sucker-fish is eaten at the end of the day's fishing. This seems like a very wasteful course of action, but it may have arisen because of the difficulty in keeping the fish alive until the next time it would be needed. In text-figure 5, we have a native drawing showing how the "Gapu" is attached to the canoe during the trip to the fishing grounds.

We have in Holmwood's account a description with figures of how the leashing is accomplished, and Haddon also is too good a scientist to leave us in doubt as to how the Torres Straits natives manage this matter. In addition to what has already been given as to the manner of making the leashings fast, his detailed account is as follows:

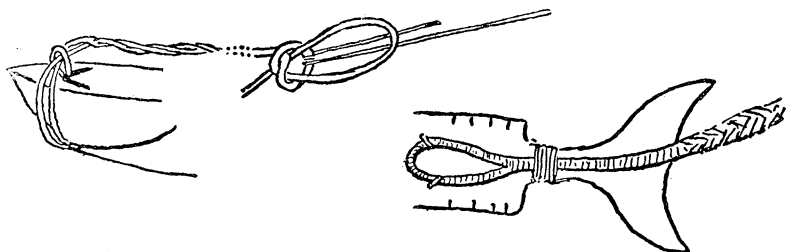
In order to understand the method of leashing a sucker-fish, I induced a native to make a model of a *gapu* for me. Fig. 173 [present text-figure 5] indicates diagrammatically the arrangements. A loop is inserted by means of a wooden arrow point through the gills and out at the mouth, the ends are passed through the loop, and one of the strands is threaded through the other, the two are then twisted into a string. The mouth string is called *gudaz* and is made of the inner bark of the root of the *wali* tree. The other end of the *gudaz* is tied into a slip knot, *kaza wiaikab*, the end of a long piece of twine is simply bent twice round the string at the knot; when the free end of the *gudaz* is pulled



TEXT-FIGURE 5. Showing how the sucker-fish is leashed by the natives of Torres Straits. Drawing of Tagai and Kareg in their canoe by Gizu of Mabuag, reduced by one half. In this drawing, the canoe, Kareg and the sucker-fish are represented the wrong way round. After Haddon, 1912.

the knot runs out, and the twine (one end of which is still held, by the fisherman) slips off the *gudaz*. The main fishing string is a very long and strong cord of twisted coco-nut fibre, *igal*; this is fastened to a braid of plaited string, *dan*, the other end of which is bent round on itself so as to form a loop; the end of the *dan* and the loop are bound round with *wali*. The loop is furnished with two strings of *wali*; it looks as if these were threaded through the tail of the fish above and below the vertebral column and tied together on the other side. Another lashing binds the cord close to the side of the narrow portion of the tail.

The sucker-fish is so well known to the natives as to give rise to a decorative motive in their decorative art. Haddon gives numerous figures of this. It is also a subsidiary totem of one of the clans in the western islands and Haddon thinks may once have been a chief totem of a



TEXT-FIGURE 6. Native drawing illustrating the method of attachment of the sucker-fish to the canoe in Torres Straits.

larger but now extinct clan. The natives moreover ascribe to it considerable intelligence. Haddon thus concludes his interesting account:

The natives have great respect for the sucker-fish and firmly believe it to possess ominous powers. For example: when the fish does not take a good hold on the turtle and then swims off it indicates that some part of the canoe is not secure; when there is something the matter with the bow of the canoe, the fish is said to attach itself to the neck of the turtle, but should the stern of the canoe be weak, the fish adheres to the extreme hinder end of the carapace; when it fixes itself firmly to the front part of the carapace, the canoe is strong; when it goes to one side of the carapace or keeps moving about, it shows that the lashings of the float to the outrigger on that particular side are insecure. More than once I was told, *Gapu savey all same man*. I think him half devil (*i. e.*, spirit).<sup>19</sup>

One other account is now to follow and all the known data will have been fully presented to the reader. E. J. Banfield, the well-known Australian, lived for a number of years on Dunk Island, off the coast of tropical Queensland, in about latitude 18° S. His experiences there are

<sup>19</sup> After Haddon's full and very detailed accounts, Meek's brief reference (1913) that the ingenious natives of Thursday Island and the adjacent parts of Torres Straits use one fish to catch another—*i. e.*, the sucking-fish with a string fastened to its tail—needs no fuller statement than that given in this footnote.

recounted in a charming book, "The Confessions of a Beachcomber." This was first published in 1908, and reprinted in 1910, and again in 1913. The following quotations are from the 1913 reprint:

Generally unprogressive and uninventive, the aborigines of the coast of North Queensland apply practically the result of the observation of a certain fact in the life history of a fish to obtain food. By them the sucker (remora) is not regarded as an interesting example of a fish . . . , but as a ready means of effecting the capture of . . . two . . . animals (turtle and dugong), always eagerly hunted for their flesh.

Other countries have sucker-fish of different form; but it remained for the benighted Australian blacks, among a few other savage races, to make practical use of the creature, which, as a means of locomotion, forms strong attachments to the dugong, turtle, shark and porpoise. It can hardly be called domesticated, yet it is employed after the manner of the falcon in hawking, save that the sucker is fastened to a light line when the game is revealed.

Having located the haunts of a remora the blacks feed it from day to day until its shyness is worn off, and then catch it with a hook.

Having secured the sucker, the blacks farm it in their haphazard fashion. They fasten a line above the forked tail so securely that it cannot slip, nor be likely to readily cut through the skin, and tether it in shallow water, when it usually attaches itself to the bottom of the canoe. When as the result of frequent use and heavy strain, the tail of the sucker is so deeply cut by the line that it is in danger of being completely severed, a hole is callously bored right through the body beside the backbone, and the line passed through it for additional security.

When ready to hunt for turtle, the natives armed with spears go out in their bark canoe to the bottom of which one of the sucking fish is attached by its sucker. When they reach a locality where turtle abound, they soon get into action.

In sight of the game the sucker which has been adhering to the bottom of the canoe is tugged off and thrown in its direction. As a preliminary the disc and shoulders of the sucker are rigorously scrubbed with dry sand or the palm of the hand, to remove the slime and to excite the ruling passion of the fish. It makes a dash for a more congenial companionship than an insipid canoe. The line by which it is secured is made from the bark of the "Boo-bah" (*Ficus fasciculata*) and is of

two strands, so light as not to seriously encumber the sucker, and yet strong enough to withstand a considerable strain. Two small loops are made in the line at intervals of two fathoms from the sucker, to act as indicators.

As soon as the sucker has attached itself to the turtle, a slight pull is given and the startled turtle makes a rush, the line being eased out smartly. Then sport of the kind that a salmon-fisher enjoys when he has hooked a 40-pounder begins. The turtle goes as he please; but when he begins to tire, he finds that there is a certain check upon him—slow, steady, never-ceasing. After ten minutes or so a critical phase of the sport occurs. The turtle bobs up to the surface for a gulp of air, and should he catch sight of the occupants of the canoe, his start and sudden descent may result in such a severe tug that the sucker may be divorced. But the blacks watch, and in their experience judge to a nicety when and where the turtle may rise; telegrams along the line from the sucker give precise information. They crouch low on their knees in the canoe, as the game emerges with half-shut eyes and dives again without having ascertained the cause of the trifling annoyance to which he is being subjected. The line is shortened up. Perhaps the turtle sulks among the rocks and coral, and endeavors to free himself from the sucker by rubbing against the boulders. Knowing all the wiles and manœuvres, the blacks play the game accordingly, and hour after hour may pass, they giving and taking line with fine skill and the utmost patience. The turtle has become accustomed to the incumbrance and visits the surface oftener for air. One of the harpoons is raised, and as the turtle gleams grey, a couple of fathoms or so under the water, the canoe is smartly paddled towards the spot whence it will emerge, and before it can get a mouthful of air the barbed point, with a strong line attached, is sticking a couple of inches deep in its shoulder.

From the foregoing interesting accounts it is clear first that in Torres Straits at the present time the aborigines use the sucking fish as a living fish-hook just as fishermen in other regions use a veritable fish-hook, *i. e.*, to bring the fish or turtle to the gaff. The gaff is, in the last account quoted, a harpoon or spear, according to others a native who dives down, guided to the turtle by the line attached to the *Echeneis*, and who then ties a line to a flipper of the turtle.